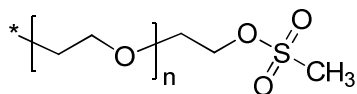


Sample Name:Poly(ethylene oxide), ω -mesylate-terminated**Sample #:** P40295-EGmesylate**Structure:****Composition:**

$M_n \times 10^3$ (g/mol)	M_w/M_n
6	1.10

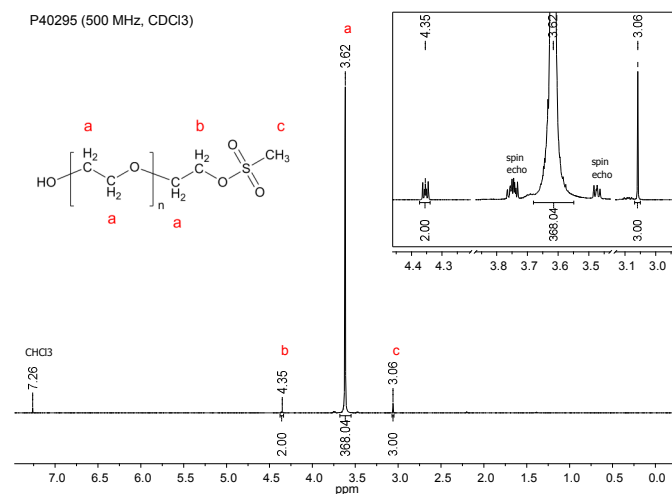
Synthesis Procedure:

Ethylene oxide was polymerized by living anionic polymerization to obtain poly(ethylene glycol) (PEG), following by its functionalization with methanesulfonyl chloride.

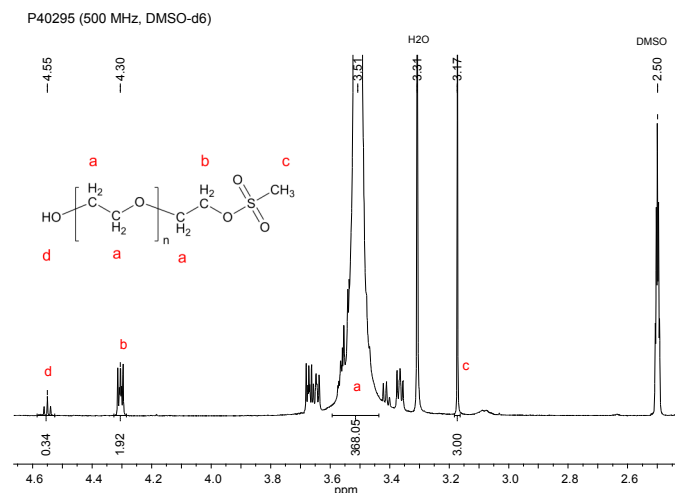
Characterization:

Purity and polymer structure was confirmed by ^1H NMR analysis done on 500 MHz Bruker spectrometer using CDCl_3 and/or DMSO-d_6 solvents.

The average molecular weight and polydispersity index (M_w/M_n) were determined by size exclusion chromatography (SEC) with triple detection, using DMF as an eluent.

 ^1H NMR spectrum of functionalized PEG in CDCl_3 :

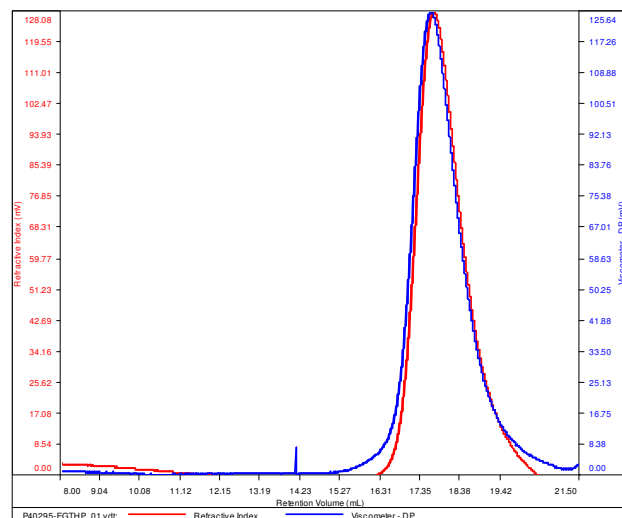
Note: End hydroxy group cannot be seen by NMR in chloroform but is observed in dimethylsulfoxide.

 ^1H NMR spectrum of functionalized PEG in DMSO-d_6 :

Molecular weight of P40295 polymer as calculated by ^1H NMR is 4,000 g/mol (degree of polymerization: 92).

SEC elugram of functionalized PEG:**P40295-EG-THP**

Conc (mg/mL)	30.3923
dn/dc (mL/g)	0.0360
Method	PS80k_December-2016-0004.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



Sample	M_n	M_w	M_p	M_w/M_n	IV
P40295-EGTHP_01.vdt	6,187	6,833	6,983	1.104	0.0668